

REMARKS

Reconsideration and allowance of the subject application, in view of the foregoing amendments and following remarks, is respectfully requested.

Upon entry of the above amendments, claims 1-5 and 7-12 remain pending.

In order to further distinguish Applicants' invention from the prior art, all of the pending claims recite that the finely divided compound is derived from a colloidal dispersion of particles of the oxide compound. Claim 5 already recited "colloidal silica."

Accordingly, no new matter is added.

As will be discussed in further detail below, the cited prior art would not have made obvious incorporating a colloidal oxide compound in acrylic polymer.

Claims 1-5 and 7-12 are rejected under 35 USC 103(a) as unpatentable over Minghetti et al (US 5,705,552 or WO 96/26238).

Withdrawal of this rejection for at least the following reasons is respectfully requested.

The only oxide disclosed in the Minghetti patents is fumed silica, specifically Cab-O-Sil M5, as a thixotropic thickening agent (e.g., U.S. 5,705,552 at col. 4, lines 23-50). In the compositions of Minghetti the fumed silica increases and controls viscosity by forming hydrogen bond networks. These networks are formed of clusters of particles, either with itself or with other particles in the matrix.

Minghetti does not disclose (nor would it have been obvious from what is disclosed) using any type of silica other than fumed silica. As applicants explain, fumed silica is effective for increasing/controlling viscosity; it is not effective for improving abrasion resistance. In the case of fumed silica and the resulting network structure, it is noted that uneven or clustered dispersions will provide, respectively, "soft" or "hard" sections and, therefore, insufficient abrasion resistance. In contrast, a colloidal oxide may be uniformly dispersed throughout the acrylic polymer matrix, particularly at the surface of the final product, to provide the object improvement in abrasion resistance, while at the same time, not interfering with the optical properties. Fumed silica will not have this effect.

Indeed, since alumina trihydrate (ATH), an essential ingredient in the acrylic sheets of Minghetti, is known as a "soft" filler, it is clear that the patentee is not at all concerned with improving abrasion resistance.

For at least the foregoing reasons, withdrawal of the rejection based on the Minghetti patents US 5,705,552 and WO 96/26238 is respectfully requested.

Claims 1-5, 7, 8 and 10, stand rejected under 35 USC 103(a) as unpatentably obvious over Kawase et al, US 5,753,362 alone, or in view of Minghetti.

Again, Kawase fails to disclose incorporation of colloidal silica in acrylic polymer matrix. The function of the particle addition to the acrylic sheets according to Kawase is to improve thixotropic properties (see, e.g., column 18, lines 55-65). One skilled in the art would not, from this disclosure, have been motivated to use a colloidal metal oxide to increase the thixotropic property of the formulations of Kawase.

Even if the disclosure of Minghetti is considered with the disclosure of Kawase, one skilled in the art would not have been motivated to use finely divided particles derived from a colloidal metal oxide, to improve the abrasion resistance while not impairing optical properties of acrylic polymer products.

Therefore, withdrawal of the rejection relying on Kawase alone or in combination with Minghetti is respectfully requested.

In view of the foregoing, all pending claims are believed to be in form for allowance, and such action is hereby solicited. If any point remains in issue which the Examiner feels may be best resolved through a personal or telephone interview, please contact the undersigned at the telephone number listed below.

All objections and rejections having been addressed, it is respectfully submitted that the present application is in a condition for allowance and a Notice to that effect is earnestly solicited.

Respectfully submitted,

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